

CPC**COOPERATIVE PATENT CLASSIFICATION****A23B**

PRESERVING, e.g. BY CANNING, MEAT, FISH, EGGS, FRUIT, VEGETABLES, EDIBLE SEEDS
CHEMICAL RIPENING OF FRUIT OR VEGETABLES
THE PRESERVED, RIPENED, OR CANNED PRODUCTS (preserving foodstuffs in general [A23L 3/00](#); preserving in general [A61L](#) ; applying food preservatives in packages [B65D 81/28](#))

Guide heading:**A23B 4/00**

General methods for preserving meat, sausages, fish or fish products

A23B 4/002

- . {Preservation in association with shaping ([A23B 4/0053](#), [A23B 4/01](#), [A23B 4/062](#) and [A23B 4/066](#) take precedence) }

A23B 4/005

- . Preserving by heating

A23B 4/0053

- .. {with gas or liquids, with or without shaping, e.g. in form of powder, granules or flakes }

NOTE

The heating means for the gas or liquid are not classified

A23B 4/0056

- ... {with packages, or with shaping in the form of blocks or portions }

A23B 4/01

- .. by irradiation or electric treatment {with or without shaping, e.g. in form of powder, granules or flakes }

A23B 4/012

- ... {with packages, or with shaping in the form of blocks or portions }

A23B 4/015

- . Preserving by irradiation or electric treatment without heating effect

A23B 4/02

- . Preserving by means of inorganic salts ([apparatus therefor A23B 4/26](#), [A23B 4/32](#))

A23B 4/021

- .. {with apparatus adapted for gaseous preserving agents }

A23B 4/023

- .. by kitchen salt or mixtures thereof with inorganic or organic compounds

A23B 4/0235

- ... {with organic compounds or biochemical products }

A23B 4/027

- .. by inorganic salts other than kitchen salt, or mixtures thereof with organic compounds, e.g. biochemical compounds

A23B 4/03

- . Drying
Subsequent reconstitution { ([drying apparatus in general F26B](#)) }

A23B 4/031

- .. {Apparatus for drying ([A23B 4/037](#) takes precedence) }

A23B 4/033

- .. with addition of chemicals ([A23B 4/037](#) takes precedence)

A23B 4/037

- .. Freeze-drying, {i.e. cryodessication, lyophilisation; Apparatus therefor }

A23B 4/044

- . Smoking
Smoking devices

A23B 4/048

- .. with addition of chemicals other than natural smoke

- A23B 4/052 .. Smoke generators; {Smoking apparatus ([A23B 4/056](#) takes precedence) }
- A23B 4/0523 ... {Smoke generators using wood-pyrolysis or wood-friction }
- A23B 4/0526 ... {Smoke generators or smoking apparatus using liquid smoke in gaseous or liquid form }
- A23B 4/056 .. Smoking combined with irradiation or electric treatment, e.g. electrostatic smoking; {Apparatus therefor }

- A23B 4/06 . Freezing
Subsequent thawing
Cooling
- A23B 4/062 .. {the materials being transported through or in the apparatus with or without shaping, e.g. in the form of powder, granules or flakes ([moving on the spot only A23B 4/066](#)) }
- A23B 4/064 ... {with packages or with shaping in the form of blocks or portions }
- A23B 4/066 .. {the materials not being transported through or in the apparatus with or without shaping, e.g. in the form of powder, granules or flakes }
- A23B 4/068 ... {with packages or with shaping in the form of blocks or portions }
- A23B 4/07 .. Thawing subsequent to freezing
- A23B 4/08 .. with addition of chemicals {or [treatment with chemicals](#) } before or during cooling, {e.g. in the form of an ice coating or frozen block }
- A23B 4/09 ... with direct contact between the food and the chemical, e.g. liquid N₂, at cryogenic temperature

- A23B 4/10 . Coating with a protective layer
Compositions or apparatus therefor { ([A23B 4/08](#) takes precedence) }

- A23B 4/12 . Preserving with acids
Acid fermentation

- A23B 4/14 . Preserving with chemicals not covered by groups [A23B 4/02](#) or [A23B 4/12](#)
- A23B 4/16 .. in the form of gases, e.g. fumigation
Compositions or apparatus therefor
- A23B 4/18 .. in the form of liquids or solids ([apparatus therefor A23B 4/26, A23B 4/32](#))
- A23B 4/20 ... Organic compounds
Micro-organisms
Enzymes ([acid fermentation A23B 4/12](#))
- A23B 4/22 Micro-organisms
Enzymes; {Antibiotics }
- A23B 4/24 ... Inorganic compounds

- A23B 4/26 . Apparatus for preserving using liquids; {Methods therefor }
- A23B 4/28 .. by injection of liquids
- A23B 4/285 ... {with inorganic salts }
- A23B 4/30 .. by spraying of liquids
- A23B 4/305 ... {with inorganic salts }

- A23B 4/32 . Apparatus for preserving using solids
- A23B 4/325 .. {with inorganic salts }

A23B 5/00	Preservation of eggs or egg products (preserving dough or bakery products A21D)
A23B 5/005	. Preserving by heating
A23B 5/0052	.. {in the shell }
A23B 5/0055	.. {without the shell }
A23B 5/0057	... {with packages }
A23B 5/01	.. by irradiation or electric treatment
A23B 5/015	. Preserving by irradiation or electric treatment without heating effect
A23B 5/02	. Drying Subsequent reconstitution
A23B 5/022	.. {Drying with use of gas or vacuum }
A23B 5/025	.. {Drying } with addition of chemicals (A23B 5/03 , A23B 5/035 take precedence)
A23B 5/0255	... {Drying with use of liquids, e.g. by extraction }
A23B 5/03	.. Freeze-drying, {i.e. cryodessication, lyophilisation; Apparatus therefor }
A23B 5/035	.. Spray-drying
A23B 5/04	. Freezing Subsequent thawing Cooling
A23B 5/041	.. {Freezing or cooling without shell (A23B 5/05 takes precedence) }
A23B 5/043	... {with packages }
A23B 5/045	.. Thawing subsequent to freezing
A23B 5/05	.. {Freezing or cooling } with addition of chemicals
A23B 5/055	... with direct contact between the food and the chemical, e.g. liquid nitrogen, at cryogenic temperature
A23B 5/06	. Coating eggs with a protective layer Compositions or apparatus therefor
A23B 5/065	.. {Apparatus for coating }
A23B 5/08	. Preserving with chemicals
A23B 5/10	.. in the form of gases, e.g. fumigation Compositions or apparatus therefor
A23B 5/12	.. in the form of liquids or solids
A23B 5/14	... Organic compounds Micro-organisms Enzymes
A23B 5/16 Micro-organisms Enzymes
A23B 5/18	... Inorganic compounds
A23B 5/20	... Apparatus for preserving using liquids
A23B 5/22	... Apparatus for preserving using solids

A23B 7/00**Preservation or chemical ripening of fruit or vegetables**

- A23B 7/005
 - . Preserving by heating
- A23B 7/0053
 - .. {by direct or indirect contact with heating gases or liquids }
- A23B 7/0056
 - ... {with packages }
- A23B 7/01
 - .. by irradiation or electric treatment
- A23B 7/012
 - ... {with packages }
- A23B 7/015
 - . Preserving by irradiation or electric treatment without heating effect
- A23B 7/02
 - . Dehydrating
 - Subsequent reconstitution ([dried cooked potatoes A23L 1/216](#))
- A23B 7/0205
 - .. {by contact of the material with fluids, e.g. drying gas or extracting liquids }
- A23B 7/021
 - .. {Foam drying }
- A23B 7/0215
 - .. {Post-treatment of dried fruits or vegetables }
- A23B 7/022
 - .. with addition of chemicals {before or during drying, e.g. semi-moist products }
([A23B 7/024](#) to [A23B 7/028](#) take precedence)
- A23B 7/024
 - .. Freeze-drying, {i.e. cryodesiccation or lyophilisation }
- A23B 7/026
 - .. Spray-drying
- A23B 7/028
 - .. Thin layer-, drum- or roller-drying {or by contact with a hot surface }
- A23B 7/03
 - .. Drying raw potatoes
- A23B 7/04
 - . Freezing
 - Subsequent thawing
 - Cooling
- A23B 7/0408
 - .. {the material being transported through or in the apparatus with or without shaping, e.g. in the form of powder, granules or flakes ([A23B 7/05](#) takes precedence; moving on the spot only [A23B 7/0425](#)) }
- A23B 7/0416
 - ... {with packages or with shaping in the form of blocks or portions }
- A23B 7/0425
 - .. {the material not being transported through or in the apparatus, with or without shaping, e.g. in the form of powder, granules or flakes ([A23B 7/05](#) takes precedence) }
- A23B 7/0433
 - ... {with packages or with shaping in the form of blocks or portions }
- A23B 7/0441
 - .. {Treatment other than blanching preparatory to freezing }
- A23B 7/045
 - .. Thawing subsequent to freezing
- A23B 7/05
 - .. with addition of chemicals {or treatment with chemicals other than cryogenics, before or during cooling, e.g. in the form of an ice coating or frozen block }
- A23B 7/055
 - ... with direct contact between the food and the chemical, e.g. liquid nitrogen, at cryogenic temperature
- A23B 7/06
 - . Blanching ([machines therefor A23N 12/00](#))
- A23B 7/08
 - . Preserving with sugars ([marmalade, jam, fruit jellies A23L 1/06](#))
- A23B 7/085
 - .. {in a solution of sugar }
- A23B 7/10
 - . Preserving with acids
 - Acid fermentation

- A23B 7/105 . . {Leaf vegetables, e.g. sauerkraut }
- A23B 7/12 . . Apparatus for compressing sauerkraut

- A23B 7/14 . Preserving or ripening with chemicals not covered by groups [A23B 7/08](#) or [A23B 7/10](#)
- A23B 7/144 . . in the form of gases, e.g. fumigation
Compositions or apparatus therefor { (cooling without control of atmosphere composition [A23B 7/04](#)) }
- A23B 7/148 . . . in a controlled atmosphere, e.g. partial vacuum, comprising only CO₂, N₂, O₂ or H₂O
- A23B 7/152 . . . in a controlled atmosphere comprising other gases in addition to CO₂, N₂, O₂ or H₂O; {Elimination of such other gases }
- A23B 7/153 . . in the form of liquids or solids
- A23B 7/154 . . . Organic compounds
Micro-organisms
Enzymes ([acid fermentation A23B 7/10](#))
- A23B 7/155 Micro-organisms
Enzymes; {Antibiotics }
- A23B 7/157 . . . Inorganic compounds
- A23B 7/158 . . . Apparatus for preserving using liquids
- A23B 7/159 . . . Apparatus for preserving using solids

- A23B 7/16 . Coating with a protective layer
Compositions or apparatus therefor ([A23B 7/08 takes precedence](#))

- A23B 9/00 Preservation of edible seeds, e.g. cereals**

- A23B 9/005 . {Processes or apparatus using pressure variation or mechanical force, e.g. shock, acceleration, shear stress, contortion }

- A23B 9/02 . Preserving by heating
- A23B 9/025 . . {with use of gases }
- A23B 9/04 . . by irradiation or electric treatment

- A23B 9/06 . Preserving by irradiation or electric treatment without heating effect

- A23B 9/08 . Drying
Subsequent reconstitution

- A23B 9/10 . Freezing
Subsequent thawing
Cooling
- A23B 9/12 . . Thawing subsequent to freezing

- A23B 9/14 . Coating with a protective layer
Compositions or apparatus therefor

- A23B 9/16 . Preserving with chemicals
- A23B 9/18 . . in the form of gases, e.g. fumigation
Compositions or apparatus therefor

A23B 9/20	...	in a controlled atmosphere, e.g. partial vacuum, comprising only CO ₂ , N ₂ , O ₂ or H ₂ O
A23B 9/22	...	in a controlled atmosphere comprising other gases in addition to CO ₂ , N ₂ , O ₂ or H ₂ O
A23B 9/24	..	in the form of liquids or solids
A23B 9/26	...	Organic compounds Micro-organisms Enzymes
A23B 9/28	Micro-organisms Enzymes; {Antibiotics }
A23B 9/30	...	Inorganic compounds
A23B 9/32	...	Apparatus for preserving using liquids
A23B 9/34	...	Apparatus for preserving using solids